



# Security Classification Guide

DARPA/STO SURVEILLANCE PROGRAM

Strategic Technology Office

31 July 1977

FOI CASE NO.	83-1204
Document	18 of 38 Documents

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY



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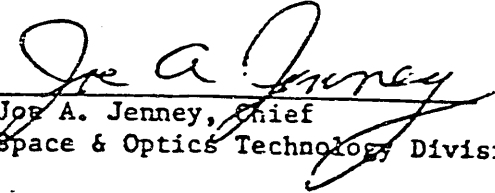
SECURITY CLASSIFICATION GUIDANCE

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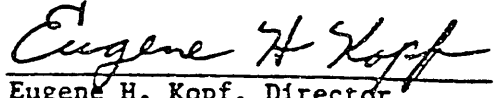
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Cognizant Office: Strategic Technology Office  
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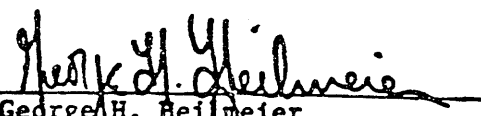
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## 1. Identification

The Defense Advanced Research Projects Agency, Strategic Technology Office (DARPA/STO) Surveillance Program denotes the DARPA/STO sponsored efforts directed toward research, development, and evaluation of technology, techniques, and demonstration equipment for performing broad area search and detection of military targets by means of their military characteristics. Included are studies, background measurements, target measurements, and advanced sensor development. The overall DARPA/STO Surveillance Program is composed of several program elements defined by the type of military target and the surveillance sensor platform. The program elements and their unclassified definitions are:

<u>Program Element</u>	<u>Unclassified Definition</u>
A. TEAL AMBER	A program for the detection of satellites using ground-based electro-optical sensors.
B. TEAL RUBY (except TEAL RUBY Experiment)	A program for the detection of air vehicles.
C. TEAL JADE	A program for detection of missiles.
D. High Altitude, Large Optics (HALO)	An advanced technology program for detection of strategic vehicles.
E. TEAL GARNET	A program for the detection of surface sea vehicles.
F. TEAL ONYX	A program for the detection of theater air and surface vehicles.

This guide applies to the above defined Program Elements and to any information relating to the overall DARPA/STO Surveillance Program. Any reference which reveals the military potential of these programs or their actual levels of performance requires SECRET classification.

<u>2. Administrative Data</u>	<u>Classification</u>	<u>Comments</u>
A. Funding	U	
B. Schedule		
(1) Component Technology	C	
(2) Sensor Development	C	
(3) Proof-of-Concept Demo	C	May be higher depending on application. Special Program Element peculiar guidance will be issued if not Confidential.

	<u>Classification</u>	<u>Comments</u>
<b>3. <u>Studies</u></b>		
A. Study results which reveal the military potential of the techniques being developed in the DARPA/STO Surveillance Programs.	S	XGDS Cat. 3
B. Studies which associate particular detection techniques with the overall program on a particular program element.	S	XGDS Cat. 3 Indication of generic techniques, such as infrared or radar is unclassified.
C. Detailed description of system and system components revealing expected system performance against various targets.	S	XGDS Cat. 3 Parameters for classification are listed in Section 4.
D. Performance requirements, capabilities, and limitations.	S	XGDS Cat. 3
E. Vulnerability to counter-measures.	S	XGDS Cat. 3
<b>4. <u>Sensors</u></b>		
A. Present state-of-the-art of DARPA/STO Surveillance Program related components and sensors.	S	XGDS Cat. 3
B. Any description revealing any of the following sensor or sensor component parameters	S	XGDS Cat. 3
(1) Sensitivity		
(2) Materials		
(3) Details of detector device structure such as:		
(a) concentrations or compositions		
(b) detector thickness		
(c) architecture		

	<u>Classification</u>	<u>Comments</u>
(4) Number of detectors per sensor		
(5) Nature of spectral filters such as:		
(a) center frequency or wavelength and resolution		
(b) rejection ratio		
(c) agility		
(6) On-board signal processing stream		
(7) Operating temperatures of any components		
(8) Wavefront and figure sensors		
(a) type		
(b) accuracy		
(9) Details of adaptive optics and active structures		
(10) FOV, IFOV, effective aperture, blur circle size		
(11) NET, $P_{det}$ , $P_{FA}$		
C. Detector arrays, special signal processing devices and adaptive spectral filters.	S	XGDS Cat. 3
D. External or internal view; visual or photographic	U	If parameters in 4(B) are not revealed.
	S	XGDS Cat. 3 If parameters in 4(B) are revealed.

	<u>Classification</u>	<u>Comments</u>
5. <u>Phenomenology</u>		
A. Instrumentation	U	If commercially available technology is used.
	S	XGDS Cat. 3 If DARPA/STO Surveillance Program Sensor Technology is used.
B. Test Plan	S	XGDS Cat. 3 Only if military potential of the program can be inferred.
C. Raw, unreduced data when not associated with format key or other classified parameters.	U	If a data link is not involved or the sensor cannot be interrogated.
	S	XGDS Cat. 3 Otherwise.
D. Reduced Data	S	XGDS Cat. 3
E. Analyzed data of measurements, modeling, or scaling.	S	XGDS Cat. 3
F. Laboratory, field, and/or field test measurements which identify targets (e.g., aircraft, mission, surface), and backgrounds and include parameters such as wavelengths, resolution, and spatial and temporal structure.	S	XGDS Cat. 3
G. All technical reports and documents classified XGDS under this guide will become declassified on 31 December 2007.		